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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,642	09/25/2003	Greg Opheim	30203/38289	6807
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MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			VERDI, KIMBLEANN C	
			ART UNIT	PAPER NUMBER
			2109	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/670,642	OPHEIM, GREG	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kacy Verdi	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on September 25, 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 25 September 2003 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :November 13, 2006, July 17, 2006, and April 1, 2005.

## **DETAILED ACTION**

This office action is in response to the Application filed on September 25, 2003. Claims 1-20 are pending in the current application.

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "16" has been used to designate both "control system application" and "communication bus" of Fig. 1. The Communication Bus of Fig. 1 should be labeled with reference character 26 as disclosed in paragraph [0014], lines 2-3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 7 is objected to because of the following informality: line 1, the recitation of "The method of claim 7,..." should be "The method of claim 6,...". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5-6, 9, 10, 14, and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,023,585 to Perlman et al. (hereinafter Perlman).

5. As to claim 1, Perlman teaches a method of updating a host application on a host system, the method comprising:

sending a first command from the host system to a device (peripheral device) to request a device description identification (WebTV client (box) 10, Fig. 5 requests device codes from all peripheral devices 30, Fig. 5, step 601, Fig. 6, col. 6, lines 12-15);

receiving the device description identification (device code) at the host system (receive device codes, step 602, Fig. 6, col. 6, lines 21-23);

downloading the device description into the host system using the device description identification (step 606, Fig. 6, col. 6, lines 52-54); and

updating the host application to include the device description (install device drivers, step 607, Fig. 6, col. 6, lines 54-56).

6. As to claim 2, Perlman teaches the method of claim 1, wherein downloading the device description (device code) includes downloading the device description from one of a CD-ROM, a diskette, and an online database (downloaded from WebTV server

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over a network (COM Device 55, Fig. 4, to internet) connection, step 606, col. 6 lines 52-54).

7. As to claim 3, Perlman teaches the method of claim 1, wherein updating the host application includes copying the device description (device driver) into the host application (receive and install device drivers in WebTV client, step 607, Fig. 6, lines 54-56).

8. As to claim 5, Perlman teaches the method of claim 1, further including searching for the device description on the host system based on the device description identification (WebTV server uses device codes to reference the database to determine the appropriate device drivers for the peripheral device, step 605, Fig. 6, col. 6, lines 47-51).

9. As to claim 6, Perlman teaches the method of claim 1, wherein downloading the device description (device driver) includes:

connecting the host system to a communication network (WebTV Server 5, Fig. 1 and WebTV Client 1 are connected to the Internet 3, Fig. 1);

requesting the device description (device driver) from a device description database (WebTV Server database, col. 6, lines 34-37) connected to the communication network ((WebTV Server 5, Fig. 1 connected to the Internet 3, Fig. 1); and

receiving the device description (device driver) from the device description database (receive and install device drivers in WebTV client from WebTV server device driver database, step 607, Fig. 6, lines 54-56).

10. As to claim 9, Perlman teaches a method of providing a software update for a host application running on a host system, the method comprising:

sending a first command to a first device (e.g. first (most senior, col. 5, line 11-14) in peripheral device daisy chain) to request a first device description identification (device code first in peripheral device daisy chain col. 5, line 11-14) identifying a first device description WebTV client (box) 10, Fig. 5 requests device code from first peripheral device, device codes and drivers may be transmitted and downloaded one at a time, on a piecemeal basis col. 6, lines 30-32), wherein the first device description is used to communicate with the first device (device driver is software which permits the computer to communicate with the device, col. 1, lines 21-24);

receiving the first device description identification (device code) at the host system (receive device code for first device using a piecemeal basis as described above col. 6, lines 30-32 , and step 602, Fig. 6, col. 6, lines 21-23);

determining if the host system includes the first device description using the first device description identification (WebTV server uses device codes to reference the database to determine the appropriate device drivers for the peripheral device, step 605, Fig. 6, col. 6, lines 47-51);

automatically downloading the first device description onto the host system if the host system does not have the first device description (downloading first device driver using a piecemeal basis as described above col. 6, lines 30-32 , and step 606, Fig. 6, 52-54); and

updating the host application with the first device description (install first device driver using a piecemeal basis as described above col. 6, lines 30-32 , and step 607, Fig. 6, col. 6, lines 54-56).

11. As to claim 10, Perlman teaches the method of claim 9, further including storing the first device description information (first device driver) on the host system (all device drivers for all peripheral devices are stored on WebTV server, col. 6, lines 34-37).

12. As to claim 14, Perlman teaches a computer system for updating a host application with a device description (device driver) of a device, the computer system being connected to a device description database (WebTV Server 5, Fig. 1, database col. 6, lines 34-37) via a communication network (WebTV Client 1, Fig. 1 is connected to WebTV Server, 5, Fig. 1, via Internet 3, Fig. 1), the computer system comprising:

a processing unit (CPU 21, Fig. 3);

a computer readable memory (RAM 23, Fig. 3); and

a software routine stored on the computer readable memory (e.g. instructions executed by CPU 21, Fig. 3 store on stored on RAM 23, Fig. 3, col. 6, lines 11-12) and adapted to be executed on the processing unit to (functions performed by WebTV Client result from CPU 21, Fig. 3, executing software instructions, col. 3, lines 56-59):

receive a device description identification (device code) from a device (receive device codes from peripheral device, step 602, Fig. 6, col. 6, lines 21-23), download the device description (device driver) from the device description (device driver) database using the device description identification (device code) (step 605-606, Fig. 6, col. 6,

lines 47-54), and update the host application with the device description (install device drivers, step 607, Fig. 6, col. 6, lines 54-56).

13. As to claim 18, Perlman teaches the computer system of claim 14, wherein the software routine (e.g. software instructions) is further adapted to update a remote host application (WebTV client, 1, Fig. 1) located on a remote computer (WebTV Box, 10, Fig. 5) communicatively connected to the computer system (com device 27, Fig. 3 connects WebTV box to remote processing systems, col. 4, lines 6-8).

14. As to claim 19, Perlman teaches a computer system for use in a process plan having a plurality of devices and one or more process applications requiring communication with the plurality of devices, the computer system comprising:

a communication module (e.g. software module (instructions)) adapted to request a device description identification (device code) from one of the plurality of devices (peripheral devices 30, Fig. 5, WebTV client (box) 10, Fig. 5 requests device codes from all peripheral devices 30, Fig. 5, using expansion bus 28, Fig. 5, step 601, Fig. 6, col. 6, lines 12-15);

a storage module (e.g. software module (instructions)) adapted to store the device description identification (host receives and then transmits (e.g. needs to store codes in order to transmit codes) device codes col. 6, lines 21-25 and step 602, Fig. 6, col. 6, lines 21-23), ;

a search module (e.g. software module (instructions)) adapted to search for a device description (device driver) database storing the device description (device driver) identified by the device description identification (device code) (WebTV server uses

device codes to reference (e.g. search) the database to determine the appropriate device drivers for the peripheral device, step 605, Fig. 6, col. 6, lines 47-51).;

a downloading module (e.g. software module (instructions)) adapted to download a device description (device driver) from the device description (device driver) database (step 605-606, Fig. 6, col. 6, lines 47-54); and

an updating module (e.g. software module (instructions)) adapted to update one of the one or more process applications (Client, Fig. 6) with the device description (device driver) (install device driver, step 607, Fig. 6, col. 6, lines 54-56).

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,023,585 to Perlman et al. (hereinafter Perlman) in view of U.S. Patent 5,960,214 to Sharpe, Jr. et al. (hereinafter Sharpe).

17. As to claim 4, Perlman does not teach the method of claim 1, wherein the host system is a system in a process plant and the device is one of a plurality of process control devices used in the process plant.

However, Sharpe teaches the method of claim 1, wherein the host system is a system in a process plant (management system used for manufacturing or refinery process, col. 6, lines 1-5 of Sharpe) and the device is one of a plurality of process

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control devices used in the process plant (conventional and smart devices 16, 18, 22, 20, and 24, Fig. 1, col. 6, lines 5-7 of Sharpe).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the invention of Perlman with the teachings of a host system and device in a process plant from Sharpe because this feature would have provided the user of the WebTV client of Perlman with a management system used to view multiple devices in a simultaneous or sequential manner, to perform common control and configuration functions without switching applications or interfaces to run non-device specific applications (col. 5, lines 39-43 of Sharpe).

18. As to claim 17, Perlman does not teach the computer system of claim 14, wherein the host application is one of (1) an asset management system application, (2) a plant simulation application, (3) a plant maintenance application, (4) a plant monitoring application, and (5) a process control application.

However Sharpe teaches wherein the host application is one of (1) an asset management system application (Field Management Solutions system 10 (FSM), Fig. 1 which integrates device management (col. 6, lines 10-13) within a manufacturing or refinery process (col. 6, lines 3-5) and (5) a process control application (FSM in interconnected with a distributed control system 14, Fig. 1, col. 5, lines 66-67 and col. 6, lines 1-5, which controls the manufacturing or refinery process, col. 6, lines 3-5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the invention of Perlman with the teachings of an asset management system or process control application from Sharpe because

this feature would have provided the user of the WebTV client of Perlman with a management system used to view multiple devices in a simultaneous or sequential manner, to perform common control and configuration functions without switching applications or interfaces to run non-device specific applications (col. 5, lines 39-43 of Sharpe).

19. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,023,585 to Perlman et al. (hereinafter Perlman) in view of U.S. Patent 6,446,202 B1 to Krivoshein et al. (hereinafter Krivoshein).

20. As to claim 7, Perlman does not teach the method of claim 6, wherein the device description database is one of a Fieldbus database, a Profibus database and a HART communication foundation database.

However Krivoshein teaches the method of claim 6, wherein the device description database is one of a Fieldbus database (Fieldbus 84 Fig. 2), a Profibus database (Profibus 80, Fig. 2) and a HART communication foundation database (Hart 86, Fig. 2, these template databases store information needed to configure devices of the different device networks, col. 13, lines 66-67 and col. 14, line 1).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the invention of Perlman with the teachings of a Fieldbus, Profibus, and a HART database as taught by Krivoshein because this feature would have provided the device driver database of Perlman with a mechanism for enabling the control system to communicate with and control different types of field

devices (peripheral devices) using different communication protocols (e.g. Fieldbus, Profibus, and HART) (col. 5, lines 46-47 of Kirvoshein).

21. Claims 8, 11-12, 15-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,023,585 to Perlman et al. (hereinafter Perlman) in view of U.S. Patent 6,694,354 B1 to Elg.

22. As to claim 8, Perlman does not teach the method of claim 6, wherein downloading the device description includes storing an Internet address of the device description database and using one of an Internet communication protocol and a wireless communication protocol to connect to the device description database.

However Elg teaches the method of claim 6, wherein downloading the device description (device driver16, Fig. 1) includes storing an Internet address of the device description database (WEB/FTP site, 17, Fig. 1) (host computer 11, Fig. 1 produces completed URL 14, Fig. 1 by inserting platform/operating system identifier and uses URL 14, Fig. 1 to access WEB/FTP site 17, Fig. 1, and download device driver 16, Fig. 1, col. 3, lines 37-41) and using one of an Internet communication protocol (HTTP/TCP/IP) and a wireless communication protocol (Infrared Data Association protocol, TCP/IP, wireless) to connect to the device description (device driver) database (communication medium 82, Fig. 11, supports RF link, HTTP/TCP/IP, Infrared Data Association protocol, wireless devices col. 5, lines 36-41 and col. 2, lines 63-65).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the invention of Perlman with the teachings of storing an URL of device driver and supporting HTTP/TCP/IP, RF Link, and Infrared

Data Association Protocol for a communication medium from Elg because this feature would have provided the WebTV client of Perlman with a mechanism for locating retrieving device drivers associated with mobile peripheral devices (col. 1, lines 51-54 of Elg).

23. As to claim 11, Perlman as modified by Elg teaches the method of claim 9, further including storing the first device description identification (receive device code for first device col. 6, lines 30-32, and step 602, Fig. 6, col. 6, lines 21-23 of Perlman), determining if the host system is connected to the Internet (host uses completed URL to download driver 57, Fig. 5, and determines if driver is obtained through URL (e.g. host connected to internet) driver obtained using URL decision 58, Fig. 5, col. 4, lines 15-21 of Elg), initiating a connection to the Internet if the host system is connected to the Internet (host uses completed URL 14, Fig. 1, to access WEB/FTP site 17, Fig. 1 via internet, col. 3, lines 15-17 of Elg) and sending a request to a device description database connected to the Internet for downloading the first device description onto the host system (completed URL 14, Fig. 1 used by host computer 11, Fig. 1, used to access WEB/FTP site 17, Fig. 1 via internet to download device driver 16, Fig. 1, col. 3, lines 14-20 of Elg).

24. As to claim 12, Perlman as modified by Elg teaches the method of claim 9, further including storing on the host system a list (WebTV server device driver database, col. 6, lines 34-37 of Perlman) relating an identification (device code) of a device manufacturer to an Internet address (URL relates to manufacturer of Ericsson, Fig. 3 of Elg) of a device description (device driver) database provided by the device

manufacturer (e.g. Ericsson) (URL Fig. 3, points to WEB/FTP site 17, Fig. 1, where manufacturer of device has stored device driver, col. 3, lines 45-50 of Elg).

25. As to claim 15, Perlman as modified by Elg teaches the computer system of claim 14, wherein the software routine (e.g. software instructions) is further adapted to be executed on the processing unit (CPU 21, Fig. 3 of Perlman) to download the device description (device driver) using one of an Internet protocol (HTTP/TCP/IP) and a wireless communication protocol (communication medium 82, Fig. 11, supports RF link, HTTP/TCP/IP, Infrared Data Association protocol, wireless devices col. 5, lines 36-41 and col. 2, lines 63-65 of Elg).

26. As to claim 16, Perlman as modified by Elg teaches the computer system of claim 14, wherein the software routine (e.g. software instructions) is further adapted to be executed on the processing unit unit (CPU 21, Fig. 3 of Perlman) to identify a DDL (e.g. protocol or OS type and version) source of the host application (host computer inserts platform/operating system identifier into URL, Fig. 3, col. 3, lines 39-44 of Elg), interpret the device description (device driver) into the DDL source (platform/operating system identifier of URL, Fig. 3 points to correct drivers which operate with platform/operating system of host computer, col. 3, lines 50-55 of Elg) and insert the device description (device driver) into the host application (device driver 16, Fig. 1, sent from WEB/FTP site 17, Fig. 1 to Host 11, Fig. 1. of Elg).

27. As to claim 20, Perlman as modified by Elg teaches the computer system of claim 19, wherein the downloading module protocol (host computer 11, Fig. 1 produces completed URL 14, Fig. 1 by inserting platform/operating system identifier and uses

URL 14, Fig. 1 to access WEB/FTP site 17, Fig. 1, and download device driver 16, Fig. 1, col. 3, lines 37-41 of Elg) communicates with the device description database using the Internet (communication medium 82, Fig. 11, supports RF link, HTTP/TCP/IP, Infrared Data Association protocol, wireless devices col. 5, lines 36-41 and col. 2, lines 63-65 of Elg).

28. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,023,585 to Perlman et al. (hereinafter Perlman) in view of U.S. Patent 6,694,354 B1 to Elg as applied to claim 12 above, and further in view of U.S. Patent 5,960,214 to Sharpe, Jr. et al. (hereinafter Sharpe).

29. As to claim 13, Perlman as modified by Elg does not teach the method of claim 12, wherein the host application is one of (1) an asset management system application, (2) a plant simulation application, (3) a plant maintenance application, (4) a plant monitoring application, and (5) a process control application.

However Sharpe teaches wherein the host application is one of (1) an asset management system application (Field Management Solutions system 10 (FSM), Fig. 1 which integrates device management (col. 6, lines 10-13) within a manufacturing or refinery process (col. 6, lines 3-5) and (5) a process control application (FSM in interconnected with a distributed control system 14, Fig. 1, col. 5, lines 66-67 and col. 6, lines 1-5, which controls the manufacturing or refinery process, col. 6, lines 3-5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further modified the invention of Perlman as modified by Elg with the teachings of an asset management system or process control application

from Sharpe because this feature would have provided the user of the WebTV client of Perlman with a management system used to view multiple devices in a simultaneous or sequential manner, to perform common control and configuration functions without switching applications or interfaces to run non-device specific applications (col. 5, lines 39-43 of Sharpe).

### ***Conclusion***

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,796,602 to Wellan et al. discloses a field device management system communicates with a smart device using a device description written in a communication protocol associated with the smart device and accesses data pertaining to a conventional or non-smart field device using a device description written in conformance with the smart device communication protocol.

U.S. Patent 5,903,455 to Sharpe, Jr. et al. discloses an interface control for use in a field device management system coupled to a set of smart field devices automatically performs functions related to communication between a device, a database and a user of the management system and functions related to interfacing with a user in a manner which is transparent to the software application running on the management system.

U.S. Patent 6,668,376 B1 to Wang et al. discloses A system and method in which device driver software for a peripheral device to be attached to a computer is

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automatically downloaded from a designated world wide web (WWW) site of the manufacturer of the peripheral device.

U.S. Patent 6,728,787 B1 to Leigh discloses a destination computer reads a device identification and a network address from a peripheral device connected to the destination computer. A device driver, corresponding to the device identification, is then retrieved from the source computer at the network address.

U.S. Patent 7,065,769 B1 to Tolopka discloses A method comprising automatic installation of device drives in which an operating system or other device installation code obtains a unique identifier from a device, uses that unique identifier to locate a driver for the device, downloads the driver from that location, and completes the installation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kacy Verdi whose telephone number is (571) 270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571) 272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KV  
4/5/2007



XIAO WU  
SUPERVISORY PATENT EXAMINER